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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Takao Iwasaki

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EXAMINER

ROHWER, JACOB P

ART UNIT

PAPER NUMBER

2624

DATE MAILED: 11/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/029,300

Applicant(s)

IWASAKI, TAKAO

Examiner

Jacob P. Rohwer

Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 October 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 11-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 Oct 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 11, 13-14, 16-17, and 19** are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No 5,149,977 to Mita, in view of US Patent No 6,483,609 to Ueno et al, further in view of US Patent No 6,658,156 to Aritomi, and further in view of US Patent Application Publication 2002/0041396 Ugajin et al.

Regarding claim 11, Mita discloses a scanner comprising:

distinguishing means for distinguishing whether the original image is a highly detailed image or not by an amount of the bitmap data; **(Fig 12 #140 and #142, Col 10 Lin 22-32, The amount of black and white pixels in the image are counted and compared using a comparator in order to determine if the an acceptable contrast exists between the two, distinguishing whether the original image is detailed or not.)**

a determining means for determining whether or not an image of sufficient image quality can be formed; **(Fig 1 #82, Col 6 Lin 36-54)**

guiding means for, when the determining means determines that the image of sufficient image quality cannot be formed, interrupting forming of the image, and guiding an operator and displaying a warning message; **(Fig 3 S510 and S512, Col 6 Lin 42-**

**49, The fact that the display is used as a second judging means for a user or operator provides a warning of poor image quality.) and**

second selecting means for selecting whether or not the forming of the image is continued. **(Fig 3 S514 and S518, Col 6 Lin 46-52)**

Mita does not expressly disclose first selecting means for selecting whether image quality is low or high.

However, Ueno discloses a first selecting means for selecting whether image quality is low or high, **(Fig 6A and 6B)** and a compression section, which performs compression on the converted resolution data determined from the user specified input image quality. **(Fig 8 S125-S130)**

The Mita and Ueno Patents are combinable because they are from the same field of endeavor relating to scanning image data.

At the time of the invention, it would have been obvious for one of ordinary skill in the art to use the first selecting means and their corresponding resolution conversion and compression processing as specified in the Ueno Patent in order to determine a copying resolution for judging the image quality as specified in the Mita Patent.

The suggestion/motivation for doing so would have been to allow the user to specify a user copy mode in order to save data transfer time and storage space.

Furthermore, Mita does not expressly disclose expanding means for expanding image data of an original image read from an original of one page of the original, the image data corresponding to a predetermined one of a variety of colors.

However, Ugajin discloses a scanner with expanding means for expanding image data of an original image read from an original of one page of the original, the image data corresponding to a predetermined one of a variety of colors. **(Para [0144] Lin 7-13)**

The Mita Patent and the Ugajin Publication are combinable because they are from the same field of endeavor relating to scanning image data.

At the time of the invention, it would have been obvious for one of ordinary skill in the art to use the expanding means as specified in the Ugajin Publication in order to help judge the image quality as specified in the Mita Patent.

The motivation/suggestion for doing so would have been to allow for spatial filtering within the read image for reproduction. **(Para [0144] Lin 16-19)**

Furthermore, the combination of Mita and Ueno discloses in Ueno an apparatus that sets an image quality copy mode, and from this setting determines a copy resolution conversion and corresponding compression processing. In combination with Mita, the image quality is judged as a result of the conversion resolution and compression processing and a second selecting means (the user) determines if processing is continued using the current resolution conversion and compression processing meeting the limitation that the determining means determines image quality based on a result of distinguishing an image compressed by a compression method and a compression rate corresponding to the image quality selected by the first selecting means; and the second selecting means for selecting whether or not the forming of the image with a high compression rate is continued as specified in the present application.

The combination however does not disclose a setting means for setting an encoding method suitable for a low compression rate when the forming of the image with the low compression rate is selected by the second selecting means, while maintaining the compression method and the compression rate corresponding to the image quality selected by the first selecting means when the forming of the image with the high compression rate is selected to continue by the second selecting means.

However, Aritomi discloses a determination section (**Col 2 Lin 2**) which determines whether or not a predetermined image quality can be obtained (**Fig 4 S6**) at the time of forming an image on said image-formed medium in said image forming section by a state of said original image read by said reading means and the compression rate set by said setting section. (**Col 4 Lin 36-41**)

Note in Aritomi that the predetermined image quality is referred to as "within a tolerable range of image deterioration", and if compression is within this range, then block compression is ruled effective, as shown in the flow chart of Fig 4. Additionally, effectiveness of compression is judged by comparing the original image and the current block being tested according to a set compression rate, as claimed in the application.

Furthermore, when it is determined that the block compression is not "within a tolerable range of image deterioration", then additional blocks are added in order to allow for more data, ultimately decreasing the compression rate by adding more blocks to the data being compressed. (**Fig 4 S8, Col 4-5 Lin 63-67 and 1-5**)

The combination of Mita and Ueno and the Aritomi Patent are combinable because they are from the same field of endeavor relating to image processing using compression.

At the time of the invention, it would have been obvious for one of ordinary skill in the art to use the compression alteration in response to intolerable image quality as specified in the Aritomi Patent as a way of setting a new the compression rate and method used in the combination of Mita and Ueno.

The motivation/suggestion for doing so would have been to allow the user to achieve the desired image quality in the reproduction.

Therefore, it would have been obvious to combine the Mita, Ueno, and Aritomi Patents along with the Ugajin Patent Application Publication in order to obtain the invention in claim 11.

Regarding claim 13, which depends from claim 11, the combination further discloses in Ueno that the distinguishing means distinguishes whether the original image is a highly detailed image or not based on whether the original image is determined to contain character strings or whether the original image is determined to contain photographic images. **(Fig 10 discloses sending text and photo data to separate resolution conversion sections.)**

Regarding claim 14, please see rejection of claim 11 above.

Regarding claim 16, please see rejection of claim 13 above.

Regarding claim 17, please see rejection of claim 11 above. Additionally the apparatus as specified in claim 11 performs the method in claim 17.

Regarding claim 19, please see rejection of claim 13 above. Additionally the apparatus as specified in claim 13 performs the method in claim 19.

**Claims 12, 15 and 18** are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Mita, Ueno, Aritomi and Ugajin as specified in claim 11, and further in view of US Patent No 6,369,873 to Levy et al.

Regarding claim 12, the combination discloses the apparatus as specified in claim 11, wherein the distinguishing means distinguishes quality based on predetermined reference values. **(Mita, Col 10 Lin 27-35, the pixel counts are compared to predetermined reference values in order to determine if the copied image is highly detailed.)**

The combination does not expressly disclose that the distinguishing means distinguishes whether the original image is a highly detailed image or not by the amount of the bitmap data.

However, Levy discloses that the number of pixels collected or scanned can determine image quality. Furthermore, Levy discloses that higher pixel counts enables higher sharpness and finer details. **(Col 6 Lin 45-55)**

The combination of Mita, Ueno, Aritomi, and Ugajin and the Levy Patent are combinable because they are from the same field of endeavor relating to determining image quality.

At the time of the invention, it would have been obvious for one of ordinary skill in the art to use the pixel count in order to determine the detail of the scanned image as



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specified in the Levy Patent in order to determine the image quality as specified in the combination of Mita, Ueno, Aritomi, and Ugajin.

The motivation/suggestion for doing so would have been to allow the user to process digital image data while determining the quality of the output.

Therefore, it would have been obvious to combine Mita, Ueno, Aritomi, and Ugajin with the Levy Patent in order to obtain the invention in claim 12.

Regarding claim 15, please see rejection of claim 12 above.

Regarding claim 18, please see rejection of claim 12 above. Additionally the apparatus as specified in claim 12 performs the method in claim 18.

### ***Response to Arguments***

Applicant argues that none of the cited art of record teaches or suggests the features of the present invention according to independent claims 11, 14, and 17 regarding that pre-scanning is performed at the time of copying and whether or not a sufficient image quality can be obtained with a compression rate set in advance by an operator, and a warning message is displayed in order for an operator to select continuing copying or copying with a decreased compression rate. However, in light of the amended claims, the examiner has updated the search and found in Mita, a means that warns a user and allow the user to choose whether or not to continue forming the image with the determined image quality when sufficient image quality is not obtainable. Additionally, there is disclosed in Ueno a copy quality set in advance by a user and a corresponding resolution conversion and compression processing is carried out based on the set quality. Ueno does not specifically mention a pre-scan, but this limitation is

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not claimed in the amended claims. The combination of Mita and Ueno, along with the previous cited reference of Aritomi referring to lowering the compression method and rate meet the limitations set forth in the amended independent claims, making applicant's arguments moot. Furthermore the dependent claims are rejected as the additional limitations are also met by the combination as specified in the rejections above.

### **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jacob P. Rohwer whose telephone number is 571-272-5509. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Moore can be reached on 571-272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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